

What is Claimed is:

1. A circuit interrupter comprising:
  - a housing;
  - separable contacts;
  - an operating mechanism for opening and closing said separable contacts;
  - a first trip mechanism including a trip circuit having a resistor, which is energized in response to a trip condition, said first trip mechanism cooperating with said operating mechanism to trip open said separable contacts in response to said trip condition, said resistor having a body which burns open in response to a failure of said separable contacts to trip open; and
  - a second trip mechanism engaging the body of said resistor and cooperating with said operating mechanism to trip open said separable contacts in response to the body of said resistor burning open.
2. The circuit interrupter of Claim 1 wherein said operating mechanism includes a trip latch; wherein said first trip mechanism includes a solenoid having a coil and a plunger; wherein said trip circuit energizes said coil through said resistor in response to said trip condition, said energized coil normally moving said plunger to engage the trip latch to trip open said separable contacts in response to said trip condition; and wherein the body of said resistor burns open in response to said plunger failing to trip open said separable contacts through said trip latch in response to said trip condition.
3. The circuit interrupter of Claim 2 wherein said second trip mechanism includes a trip member and a spring biasing said trip member toward said trip latch; wherein the body of said resistor normally blocks said trip member; and wherein the body of said resistor burns open to release said trip member, in order to trip open said separable contacts through said trip latch in response to said plunger failing to trip open said separable contacts through said trip latch in response to said trip condition.
4. The circuit interrupter of Claim 1 wherein said circuit interrupter is a wall outlet ground fault circuit interrupter (GFCI) device.

5. The circuit interrupter of Claim 1 wherein said circuit interrupter is a wall outlet arc fault circuit interrupter (AFCI) device.

6. The circuit interrupter of Claim 1 wherein said circuit interrupter is a wall outlet ground fault and arc fault circuit interrupter (GFCI/AFCI) device.

7. The circuit interrupter of Claim 1 wherein said circuit interrupter is a molded case circuit breaker.

8. The circuit interrupter of Claim 7 wherein said molded case circuit breaker is a ground fault circuit breaker.

9. The circuit interrupter of Claim 7 wherein said molded case circuit breaker is an arc fault circuit breaker.

10. The circuit interrupter of Claim 7 wherein said molded case circuit breaker is a ground fault and arc fault circuit breaker.

11. The circuit interrupter of Claim 3 wherein said housing has a opening; wherein the trip member has an indicator movable therewith; and wherein said indicator is visible through the opening of said housing with the release of said trip member.

12. A circuit interrupter comprising:  
a housing;  
first separable contacts within said housing;  
an operating mechanism for opening and closing said first separable contacts;

a trip circuit including a resistor, which is energized in response to a trip condition, said trip circuit cooperating with said operating mechanism to trip open said first separable contacts in response to said trip condition, said resistor having a body which burns open in response to a failure in said trip circuit;

second separable contacts electrically connected in series with said first separable contacts;

a movable contact arm having an open position for opening said second separable contacts and having a closed position for closing said second separable contacts, said movable contact arm held in the closed position thereof by the

body of said resistor, said movable contact arm being movable to the open position thereof in response to the body of said resistor burning open; and

a spring which biases said movable contact arm toward the open position thereof.

13. The circuit interrupter of Claim 12 wherein said second separable contacts are within said housing;

14. The circuit interrupter of Claim 12 wherein said second separable contacts are external to said housing.

15. The circuit interrupter of Claim 12 wherein said housing has a opening; wherein said movable contact arm has an indicator movable therewith; and wherein said indicator is visible through the opening of said housing in the open position of said movable contact arm.

16. The circuit interrupter of Claim 12 wherein said operating mechanism includes a trip latch; wherein said first separable contacts are adapted to receive a line voltage; wherein said trip circuit includes an SCR and a solenoid having a coil and a plunger; wherein said trip circuit energizes said coil with said line voltage through said resistor and said SCR in response to said trip condition, said energized coil normally moving said plunger to engage the trip latch to trip open said separable contacts in response to said trip condition, the body of said resistor burning open in response to said plunger failing to trip open said separable contacts through said trip latch in response to said trip condition.

17. The circuit interrupter of Claim 12 wherein said circuit interrupter is a wall outlet circuit interrupter device.

18. The circuit interrupter of Claim 17 wherein said wall outlet circuit interrupter device is a wall outlet ground fault and arc fault circuit interrupter (GFCI/AFCI) device.

19. The circuit interrupter of Claim 12 wherein said circuit interrupter is a molded case circuit breaker.

20. The circuit interrupter of Claim 19 wherein said molded case circuit breaker is a ground fault and arc fault circuit breaker.

21. A circuit interrupter comprising:

- a housing;
- a line terminal;
- a load terminal;
- a power circuit including separable contacts electrically connected between said line terminal and said load terminal;
- an operating mechanism for opening and closing said separable contacts;
- a trip circuit including a resistor, which is energized in response to a trip condition, said trip circuit cooperating with said operating mechanism to trip open said separable contacts in response to said trip condition, said resistor having a body which burns open in response to a failure of said separable contacts to trip open;
- means for engaging the body of said resistor; and
- means responsive to said means for engaging for opening said power circuit in response to the body of said resistor burning open.

22. The circuit interrupter of Claim 21 wherein said separable contacts are first separable contacts; wherein said power circuit further includes second separable contacts electrically connected in series with said first separable contacts between said line terminal and said load terminal; wherein said means for engaging includes a movable contact arm having an open position for opening said second separable contacts and having a closed position for closing said second separable contacts, said movable contact arm held in the closed position thereof by the body of said resistor, said movable contact arm being movable to the open position thereof in response to the body of said resistor burning open; and wherein said means responsive to said means for engaging includes a spring which biases said movable contact arm toward the open position thereof.

23. The circuit interrupter of Claim 21 wherein said means for engaging the body of said resistor includes a trip member; wherein said means responsive to said means for engaging is a trip latch; wherein the body of said resistor normally blocks said trip member; and wherein the body of said resistor burns open to release said trip member, in order to trip open said separable contacts through said trip latch.